7/6/87 CO200-1

Consumer markets abroad

IN DEPTH / BELO HORIZONTE P. 1 RANKINGS P. 15
INSIDE INFORMATION P. 14
WHAT THE NUMBERS MEAN P. 15 PUBLICATIONS P. 16

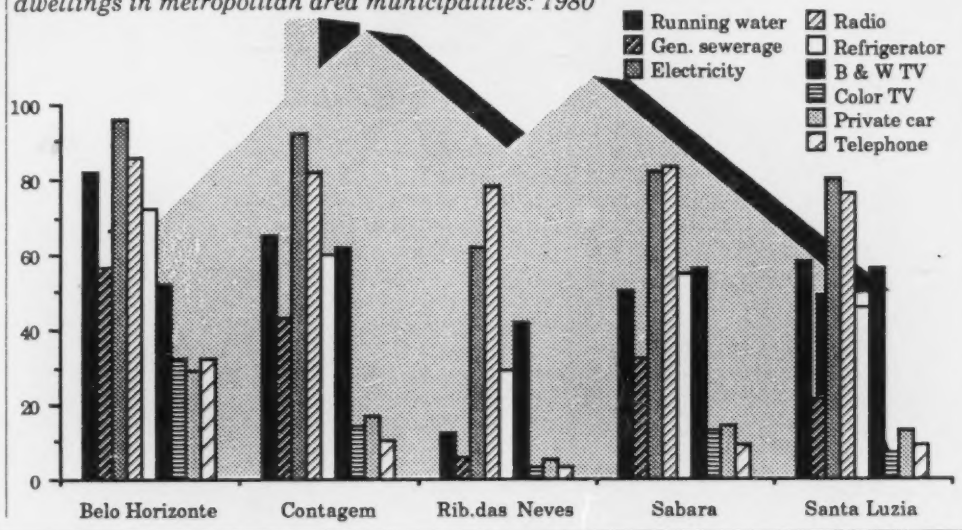
in depth

BRAZIL'S OTHER CITY: BELO HORIZONTE

Belo Horizonte is the second fastest growing metropolitan area in Brazil.

BELO HORIZONTE PROPER OFFERS A BETTER LIFE

Ownership of consumer durables for households in permanent dwellings in metropolitan area municipalities: 1980



If Sao Paulo is Brazil's shiny locomotive and Rio de Janeiro the carriage where they are having a party, Belo Horizonte is one of the coal cars. An industrial city, Belo Horizonte shares little of the glamour of its larger companions, but, nevertheless, is the second fastest growing metropolitan area in Brazil, after Curitiba, the capital of the southern state of Parana.

With an estimated 3.12 million residents in 1985—up from 2.5 million in 1980—Belo Horizonte is Brazil's third largest urban agglomeration, after Sao Paulo and Rio de Janeiro, and Latin America's ninth largest metro area. With continued high growth rates projected for this thriving city, population projections by the Metropolitan Planning Board (PLAMBEL) peg the total metropolitan population at 3.75 million in 1990, and at 4.34 million in 1995.

CITIES AND NEIGHBORHOODS

The urban agglomeration of Belo Horizonte encompasses the municipalities of Belo Horizonte, Contagem, and Betim, as well as parts of Ibirite, Ribeirao das Neves, Sabara, Santa Luzia, and Vespasiano. In 1981, it extended over an area of 160 square miles, or 11.2 percent of the metropolitan area, concentrating almost 88 percent of

FORMERLY INTERNATIONAL DEMOGRAPHICS
VOLUME 6 NUMBER 7 JULY 1987

Of the largest 100 non-financial corporations in Minas Gerais, 54 have their headquarters in Belo Horizonte.

its population. The other, more distant, municipalities that make up the metropolitan area are Caete, Lagoa Santa, Nova Lima, Pedro Leopoldo, Raposos, and Rio Acima.

The geographic division used by the Brazilian Census Bureau (Fundacao IBGE) is the so-called micro-region. Apart from Belo Horizonte proper and the 13 other municipalities of the metropolitan area, the micro-region of Belo Horizonte contains six additional municipalities: Capim Branco (1980 population: 4,930), Esmeraldas (16,206), Jose de Melo (4,074), Matozinhos (16,198), Prudente de Morais (4,229), and Taquaracu de Minas (3,457).

Of these, Esmeraldas and Matozinhos, which lie to the northwest, are influenced particularly by the metropolitan area, especially in regards to real estate speculation and commuter workforce. To the west, Mateus Leme, Igarape, Brumadinho, Itauna, and Bonfim are some other municipalities under the influence of the metropolitan area which, among other things, draws much of its drinking water

THE METROPOLITAN AREA OF BELO HORIZONTE
Municipalities and functional areas

I. Belo Horizonte
II. Betim
III. Caete
IV. Contagem
V. Ibirite
VI. Lagoa Santa
VII. Nova Lima
VIII. Pedro Leopoldo
IX. Raposos
X. Ribeirao das Neves
XI. Rio Acima
XII. Sabara
XIII. Sanat Luzia
XIV. Vespasiano

1. Central Area
2. Mangabeiras
3. Santo Antonio
4. Betania
5. Calafate/Barroca
6. Gameleira
7. Carlos Prates/Padre Eustaquio
8. Lagoinha
9. Cachoeirinha
10. Renascenca
11. Floresta/Horto
12. Santa Efigenia
13. Pampulha
14. Barreiro
15. Durval de Barros
16. Venda Nova
17. Aarao Reis
18. Sul do Barreiro
19. Lesto do Aglomerado

Consumer markets abroad

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Consumer Markets Abroad, formerly International Demographics (ISSN 0731-5414) is published monthly by American Demographics, Inc. P.O. Box 68 Ithaca, New York 14851. Telephone (607) 273-6343. Copyright 1987 by American Demographics, Inc. All rights reserved. Subscription rates are $189 a year/$269 for two years. Multiple subscriptions of three or more billed to the same address are $99 a year.

from this area.

In 1980, the state of Minas Gerais accounted for 20.6 percent of Brazil's metal industry, as well as for 14.9 percent of the national production of non-metallic minerals (especially cement), and 14.1 percent of the tobacco processing. The processing of several kinds of semi-precious stones, for which Minas Gerais is renowned, is another industrial activity of some importance. Of the largest 100 non-financial corporations in Mi-

RAPID EXPANSION OF THE BELO HORIZONTE METRO AREA

Municipalities of the metropolitan area of Belo Horizonte and neighborhoods of the Central Municipality, with their total populations and population density (1980) and growth rates (1970-80)

municipality	*population in 1980*	*population density in 1980 (per square mile)*	*annual rate of population growth 1970-80*
Belo Horizonte	1,780,855	13,762	3.7%
Betim	84,183	580	8.3
Caete	30,634	150	2.0
Contagem	280,477	4,348	9.7
Ibirite	39,970	714	7.4
Lagoa Santa	19,508	180	3.3
Nova Lima	41,223	260	1.9
Pedro Leopoldo	29,999	257	3.8
Raposos	11,810	397	1.5
Ribeirao das Neves	67,257	1,109	21.4
Rio Acima	5,069	58	-0.1
Sabara	64,204	811	3.6
Santa Luzia	59,892	455	9.0
Vespasiano	25,049	559	7.3
neighborhood			
Aarao Reis	168,816	21,340	7.9%
Barreiro	132,329	12,430	7.8
Betania	32,546	10,007	10.9
Cachoeirinha	67,449	26,417	0.9
Calafate/Barroca	115,829	29,897	1.3
Carlos Prates/Padre Eustaquio	106,511	25,298	0.2
Central Area	83,585	27,850	-1.4
Durval de Barros	45,807	15,401	11.5
Floresta/Horto	170,062	30,831	1.1
Gameleira	37,144	18,109	1.8
Lagoinha	48,305	37,330	-0.4
Leste do Aglomerado	396	22	—
Mangabeiras	92,714	20,153	3.4
Pampulha	97,717	5,167	6.4
Renascenca	80,500	22,457	2.1
Santa Efigenia	99,122	33,899	1.9
Santo Antonio	79,810	15,115	3.7
Sul do Barreiro	—	—	—
Venda Nova	121,107	20,008	12.0

Sources: Fundacao IBGE, Censo Demografico, 1970 and 1980; Minas Gerais, Anuario Estatistico, 1982; PLAMBEL, RMBH: Populacao Observada e Estimada, 1986

About 30 percent of the families living in the Zona Sul area have family incomes of over 20 times the legal minimum wage (which is about $US 60 per month).

nas Gerais, 54 have their headquarters in Belo Horizonte, 11 in Contagem, and 6 elsewhere in the metropolitan area.

The southern portion of the metropolitan area is part of the so-called iron belt, with geological conditions favorable to mining. The Morro Velho gold mine in Nova Lima was opened by a British firm in 1834, but was sold to its present Brazilian owners in 1959.

Iron mining is one of the most important economic activities in the state of Minas Gerais. The exploration of iron ore on the slopes of the Serra do Curral, started during the early 1970s, so disfigures the Belo Horizonte skyline that Carlos Drumond de Andrade, Brazil's foremost poet and a native *mineiro,* once referred to the city as Triste Horizonte (Sad Horizon). Mining is also of some importance in the municipalities of Sabara and Raposos. Vespasiano, Pedro Leopoldo, and Sete Lagoas, although not part of the iron belt, are important because of their quarries, which provide much of the raw material for the cement industry of Contagem. Santa Luzia has a traditional importance as an agricultural area, along with some gold panning and mineral extraction. Since the 1950s it has also become the location of several more modern industries, mostly for the fabrication of intermediate goods, through the formation of industrial districts. Sabara was an important trading center during the 18th century, the heyday of the gold rush which led to the mass settlement of Minas Gerais. Today, it is one of Minas' historical cities, famous for its churches and other works of art.

Caete and Pedro Leopoldo are the municipalities least affected by the growth of the metropolitan area. Even today, they maintain some rural characteristics, complemented by their own autonomous urban activities, like the Ferro Brasileiro company in Caete and the Caua cement factory in Pedro Leopoldo.

WHERE THE HAVES AND HAVE-NOTS LIVE IN THE CITY PROPER

The Central Area of Belo Horizonte (see map on page 2) contains 28.7 percent of all establishments and 66.2 percent of all employment in commerce and services. The service and commercial sector in the neighborhood of the bus station and the intersection of Avenida Afonso Pena and Avenida Amazonas is generally of low quality. The more sophisticated establishments are located in the southern part of the center, in the neighborhood of Savassi. From 1970 until 1980, the center lost population as it was gradually taken over by business. Since 1980, however, this trend has turned around because of the construction of several new high rise apartment buildings.

To the south of the city center is the "Zona Sul," with the fashionable neighborhoods of Serra, Santo Antonio, Mangabeiras, and Belvedere. As many as 30 percent of the families in this area have family incomes of over 20 times the legal minimum wage (which is about $US 60 per month), with the highest average (29.6) in Belvedere. Catering to the needs of the upper middle class, the city's only shopping mall is also located in this area.

The lower-middle class lives predominantly in the areas to the west and north of the center. Calafate, Barroca, and Gameleira are

neighborhoods of this kind, marked by the Avenida Amazonas, the major throughway to the industrial districts further west. The campus of the Catholic University of Minas Gerais is located in Gameleira. Betania is a poorer area, but due to its proximity to the "Zona Sul," it is gradually being invaded by upper-income residential construction, which is the major reason why average incomes in this area have been on the rise.

Further north, Carlos Prates, Padre Eustaquio, Lagoinha, Cachoeirinha, Floresta, Horto, and Renascenca are traditional working-class neighborhoods which have now become predominantly middle class. Some, like Carlos Prates and Cachoeirinha, have some traditional industries, like textiles and clothing, beverages, and furniture.

Although population mobility in most of these areas is high, only Lagoinha, Floresta, Horto, and Renascenca are undergoing major structural changes. Lagoinha is a somewhat run-down district mostly characterized by low-grade service activities. It contains the bus station and its surrounding road system, which has been subject to major infrastructural modifications in recent years.

Floresta, Horto, and Renascenca are changing in terms of their social environment. The neighborhood of Cidade Nova, in the Renascenca area, has become the scene of significant residential development for the upper-middle class. Likewise, other neighborhoods in this general area are being upgraded with newly constructed upper-middle-income apartment buildings. Santa Efigania, on the eastern fringe, close to the mountains, is a lower-middle-class neighborhood, interspersed with several slum areas.

The suburb of Pampulha is largely a creation of Juscelino Kubitschek, who was mayor of Belo Horizonte from 1940 until 1945 and later became famous as the Brazilian president who built Brasilia. Among other things, he paved all existing streets and constructed the dam which led to the formation of the Pampulha lake. On the banks of this lake, along with the upper-income residences, several architecturally interesting buildings were constructed, such as the renowned Chapel of Sao Francisco de Assis, a creation of Oscar Niemeyer, who later became the architect of Brasilia. In the 1950s, the Federal University of Minas Gerais began to locate its campus here. More recently, the "Mineirao," Belo Horizonte's soccer stadium, was constructed by the lakeside. The airport of Pampulha has been largely deactivated since the inauguration of the Tancredo Neves international airport, up north, in the Confins district of Lagoa Santa. It now only receives some local flights and shuttle services to Sao Paulo and Rio de Janeiro.

Carlos Prates, Padre Eustaquio, Lagoinha, Cachoeirinha, Floresta, Horto, and Renascenca are traditional working-class neighborhoods which have now become predominantly middle class.

THE BROADER PICTURE— ECONOMICS OF THE METRO AREA

Much of the industrial potential of the metropolitan area is concentrated in the industrial zones to the west, particularly in the Barreiro area of Belo Horizonte, in Contagem, and Betim. Together with the neighboring municipality of Ibirite and the Durval de Barros area, on the border between Belo Horizonte and Ibirite, this larger region accounts for 20.8 percent of all industrial establishments and 51 percent of all manufacturing jobs in the Metropolitan region.

Most of the firms are large, like the Mannesmann steel industry in

trendwatch Belo Horizonte

Continued strong population growth

More households with running water and sewerage

Explosive growth to continue in outskirts

Barreiro and the Belgo-Mineira steel plant in Contagem. Among its 500 firms, Contagem counts major food, textile, machinery, and electrical equipment industries. Next to the steel mills, the Itau cement factory produces a good deal of the pollution for which Contagem has a bad reputation.

Betim is important as the location of the Fiat automobile factory, built in the 1970s, and the Gabriel Passos refinery, created in 1967, which is linked to the port of Rio de Janeiro by means of a 225 mile-long pipeline. Durval de Barros and Ibirite have little economic activity of their own and are mostly dormitory towns for the industrial workers of Contagem and Betim.

Until the 1960s, the western section of the metropolitan area was quite poor and deficient in terms of infrastructure. Even today, most of its population should be classified as working class, with family incomes that rarely exceed $US 300, or five times the minimum wage of $US 60 per month. In Betim and Ibirite, the average is even lower.

However, urban infrastructure in some areas, notably in Contagem, has benefited greatly from the 1967 tax reform, which strengthened the local tax base of the municipalities. Consequently, areas like the Riacho district in Contagem now have some amenities catering to local managers and administrators that used to be found only in Belo Horizonte. The present governor of Minas Gerais, Newton Cardoso, made his political career as the mayor of Contagem by pushing public works projects, like paving roads and building low-income housing.

The poorest region within the metropolitan area is made up of a series of dispersed settlements in the northern periphery which together make up nearly 25 percent of its population. This is also one of the most rapidly growing areas, with an average annual increase of 10.2 percent during the 1970s. Its various components—Ressaca (literally "Hang-over") and Nacional, on the border between Belo Horizonte and Contagem, Justinopolis and Ribeirao das Neves, Venda Nova, Sao Benedito in the contiguous urban area of Santa Luzia, Aarao Reis, and General Carneiro, on the border with Sabara—are mostly dormitory towns, with populations that consist predominantly of workers in construction and personal services, with family incomes ranging from about $US 100 to $US 250 per month. Aarao Reis has some industry of its own. General Carneiro is one of the few areas in the periphery that has the benefit of a suburban train to facilitate access to the Central Area of Belo Horizonte.

STRIKING DIFFERENCES BETWEEN RICH AND POOR

As everywhere in Brazil, income differences in the Belo Horizonte metropolitan area are very large. Because of the constant changes of income values in nominal terms due to triple-digit inflation, it is usual in Brazil to express incomes in terms of multiples of the legal minimum wage, which amounts to approximately $US 60 per month. The median individual income is 1.7 minimum wages. The Gini index of individual income inequality, which may vary from 0 to 1, is 0.58.

In the richest neighborhoods, mean family incomes are more than 20 minimum wages: Belvedere (29.6), Santa Lucia and Sao Bento (23.3) and Cidade Jardim

(20.6), all in the Santo Antonio/Sao Bento area, Mangabeiras (26.2), and the neighborhood of Sao Luiz (21.8) in Pampulha.

At the other extreme, the poorest neighborhoods have mean family incomes of around 2 minimum wages: Favela da Serra and Morro do Querozene (2.2), Durval de Barros (2.1), the Cinco neighborhood in Contagem (2.2), Jardim Teresopolis (1.8), Vargem das Flores (1.8) in Betim, Areias (2.1) in Justinopolis, on the border of Belo Horizonte and Ribeirao das Neves, Boleira (2.0) on the northern edge of Belo Horizonte, Gorduras (1.9) in Aarao Reis, Campinho de Baixo (1.9) in Lagoa Santa, Pinhoes (2.1) in Santa Luzia, Fidalgo (2.0) and Vera Cruz (2.0) in Pedro Leopoldo, and Rocas Novas (1.9) in Caete.

RAPID POPULATION GROWTH

Like Brasilia, Belo Horizonte—or at least its central portion—is a planned city. It was especially constructed to be the capital of Minas Gerais. From 1720 to 1897, that function had been fulfilled by the picturesque Ouro Preto (literally "Black Gold"), 65 miles to the southeast. The city's basic design was laid out by the architect Aarao Reis, whose name now adorns a neighborhood. The city was to be called Cidade de Minas, a name that never stuck. Its street pattern was inspired by Washington, D.C., Mar del Plata, and by the great urban reform of Paris around 1860.

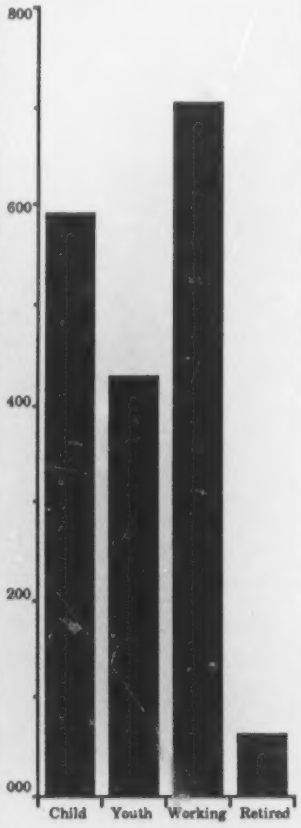
Accordingly, Belo Horizonte has 60 feet wide quadrangular Ruas, cut by diagonal tree-lined Avenidas that are 105 feet wide. This original design was contained within a circular avenue, the Avenida do Contorno. In the north-south direction this nucleus is cut by Belo Horizonte's main avenue, the Avenida Afonso Pena, which links the bus station with the southern neighborhoods of Serra, Mangabeiras, and Santo Antonio, on the slopes of the Serra do Curral.

Until 1920, its economic development was minimal, even though the population grew from 13,472 inhabitants in 1900 to 55,563 in 1920. At the occasion of the Eucharistic Congress in 1936, a series of improvements were made in the urban infrastructure, and in 1941 the Industrial City, the first project of this kind in Brazil, was implanted in Contagem. The Avenida Amazonas became the main artery linking the old center with this expanding industrial area. During this same period, Mayor Juscelino Kubitschek developed the suburb of Pampulha as a recreational and residential area. The Avenida Antonio Carlos which linked the center to Pampulha became an important commercial zone.

In 1940, the city counted 215,191 inhabitants, in 1950, 352,724, and by 1960 it had grown to 693,908. The 1950s were a period of particularly strong industrial expansion, fed by considerable demographic growth of about 6.5 percent annually. Migration accounted for about 60 percent of this growth. The recently implanted industries of Contagem attracted substantial migration, and consequently the municipality grew from as little as 3,462 inhabitants in 1940 to 280,447 in 1980, with unprecedented average rates of 16.5 percent annually during the 1950s and 14.8 percent in the 1960s.

Similarly, Ibirite evolved from a rural community of 1,452 people in 1940 to a fair-sized urban area, with 40,014 inhabitants in 1980. Many of the new migrants settled in improvised dwellings on illegally

POPULATION OF MUNICIPAL BELO HORIZONTE: 1980
in thousands



occupied lots. It was during this period that the local administrators began to lose their control over urban growth.

Today, Belo Horizonte is the third largest industrial agglomeration in Brazil. Since 1960, the metropolitan area has been growing by an amazing average of 5.4 percent annually, causing a good deal of urban chaos, particularly in the peripheral districts.

Nevertheless, the city has so far remained relatively free from some of the common problems of industrialization, such as pollution. Due in part to the efficiency of the local police, crime rates in Belo Horizonte are also significantly lower than in Rio de Janeiro and Sao Paulo.

FUTURE URBAN EXPANSION

Of the total available area of Belo Horizonte, 61.1 percent is occupied. In the other major municipalities, Contagem and Betim, these percentages are 30.6 percent and 26.0 percent, respectively.

Urban growth toward the south, in the direction of the nearby Nova Lima, is blocked, even though some high-income residences in this area challenge the forces of nature in exchange for a beautiful view by locating on the erosion-prone slopes of the Serra do Curral. Toward the east, the advance of the city is likewise blocked by a mountain range. Consequently, the city expands predominantly toward the north and especially the west.

The opening, in January 1984, of the new Tancredo Neves international airport at Confins, in the municipality of Lagoa Santa, has created some pressure for developing the unoccupied stretches north of the Venda Nova district. The main thrust of urban expansion, however, is directed toward the west, to the point where one continuous stretch of urbanized areas now connects Belo Horizonte, Contagem, and Betim. In the northwest, Belo Horizonte's urban area is penetrating the municipality of Ribeirao das Neves, which saw a virtual explosion of its population between 1970 and 1980, from 9,707 to 67,257 inhabitants. With 17.3 percent of its available area occupied, it has become the fourth most densely settled municipality in the metropolitan area, after Belo Horizonte, Contagem, and Betim.

Obviously, most of the future growth projected by PLAMBEL—metro population nearing 4 million by 1990 and 4.3 million by 1995—will take place in the areas that are now peripheral, in the extreme north and west, especially in Betim (a 156 percent increase during the decade), the Sao Benedito district of Santa Luzia (175 percent increase), the remote Nacional district of Contagem (278 percent increase) and Vespasiano (110 percent increase).

Meanwhile, traditional areas like the Center, the "Zona Sul," Calafate, Gameleira, Carlos Prates, Padre Eustaquio, Renascenca, Floresta, Horto, and Pampulha should not grow by more than 2 percent annually, whereas Lagoinha and Cachoeirinha are expected to lose population.

Pampulha, which still has some open spaces, is expected to grow at an average of 3 to 4 percent annually during the present decade. Similarly, Betania should further increase by rates in the order of 5 to 6 percent as more middle-class apartment buildings enter the area. The older industrial areas in

the west of Belo Horizonte and Contagem are likely to maintain intermediate growth rates, in the order of 4 to 7 percent, with the exception of the central district of Contagem, where this number should remain somewhat higher during the present decade.

NEWCOMERS DOMINATE GROWTH

Although no longer as intense as during the 1950s, migration continues to account for a substantial portion of the growth of the metropolitan area. On the whole, 29.1 percent of its inhabitants interviewed in the 1980 census had lived there for less than 10 years. Obviously, the percentages were higher in the fastest growing municipalities: 45.6 percent in Santa Luzia, 48.2 percent in Ibirite, 48.9 percent in Betim, 49.7 percent in Contagem, and 75.6 percent in Ribeirao das Neves.

The overwhelming majority (more than 85 percent) of the recent migrants are from other areas within the state of Minas Gerais. Apart from the region immediately adjacent to the metropolitan area, the main sending area is that of Rio Doce, in the northeast of the state of Minas Gerais. The out-of-state migrants are mostly accounted for by the neighboring states: Sao Paulo, Rio de Janeiro, Bahia, and Espirito Santo.

Natural increase accounts for the remaining population growth. The number of children women in the micro-region of Belo Horizonte commonly bear in their lifetimes is low by Brazilian standards: an average of 3.5 children for each woman in the late 1970s, when the national average was 4.3. The sharp drop of fertility noted in all of Brazil since 1980 may have reduced this number even further. The number of registered deaths in the metropolitan area amounted to 20,049 in 1984.

The population of Belo Horizonte is predominately young, although not excessively so. The median age in 1980 was 21.3 years in the metropolitan area and 22.0 in the municipality of Belo Horizonte. The percentage of children under age 15 has declined somewhat, from 39.8 percent in 1970 to 35.3 percent in 1980, while the percentage over age 60 increased from 4.5 percent to 5.0 percent. The highest percentage of people over age 60 is found in Rio Acima (8.3 percent) and the lowest in Ribeirao das Neves (2.7 percent), Contagem (3.3 percent), and Ibirite (3.5 percent).

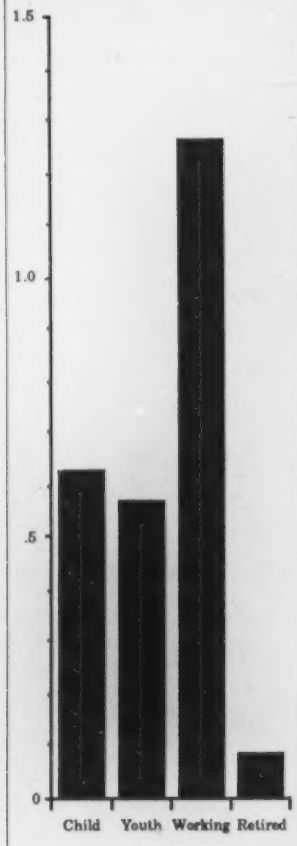
A total of 19,281 marriages were made in the metropolitan area in 1983, of which 12,772 occurred in the municipality of Belo Horizonte. True to the reputedly conservative nature of family life in Minas Gerais, the number of divorces and separations is fairly small: 1,129 and 1,490, respectively, in 1981. Almost all of these occurred in the municipality of Belo Horizonte.

HOUSEHOLDS AND HOUSING

Given the explosive growth rates of the metropolitan area as a whole, and especially some municipalities, like Betim, Contagem, Ribeirao das Neves, and Santa Luzia, maintaining an adequate level of infrastructure and basic services is no easy task. Nevertheless, considerable advances have been achieved in this area.

The percentage of households served by running water increased from 49 percent of all households in 1970 to 75 percent in 1980. The corresponding numbers for sewerage

POPULATION OF THE METRO AREA OF BELO HORIZONTE: 1980
in millions



Middle- and upper-class housing is expanding, especially in areas like Cidade Nova, which is part of the Renascenca region, Betania, and Horto.

were 34 percent and 50 percent. Major improvements occurred in the municipalities of Belo Horizonte, Contagem, and Rio Acima. However, in some of the fastest growing municipalities, urban services could not keep up with the rapidly expanding population. In Ribeirao das Neves, the proportions of households served by running water and sewerage dropped from 26 percent to 12 percent and from 11 percent to 6 percent, respectively.

Little or no improvement in the provision of running water occurred in Nova Lima, Raposos, and Sabara, nor in the extension of sewerage in Betim, Ibirite, and Sabara. The electrical power system has expanded everywhere, from an average of 79 percent of all homes in 1970 to 92 percent in 1980. Garbage collection reached 57 percent of all homes in 1980. The figure was highest in Vespasiano (89 percent) and Pedro Leopoldo (81 percent) and lowest in Rio Acima (none at all), Ribeirao das Neves (4 percent), and Ibirite (15 percent).

One of the major planning problems is the periodic flooding of the Arrudas River, which cuts the city in half, as well as the flooding of several smaller streams. The last major flood, in January 1983, caused more than 80 deaths and left 5,000 people homeless, especially in the *favelas,* or squatter settlements. The canalization of the Arrudas River, one of the main public works of the past administration, should alleviate this problem in the future.

Middle- and upper-class housing is expanding, especially in areas like Cidade Nova, which is part of the Renascenca region, Betania, and Horto. Land prices are highest in the area contained within the Avenida do Contorno, Mangabeiras, and Cidade Nova. Santo Antionio is losing some of its attraction as a high-income residential area.

In 1981, PLAMBEL estimated the number of favela dwellings in the metropolitan area at 65,690, with a total of 294,410 inhabitants, or 4.48 per household. Favela settlements are not limited to any particular area within greater Belo Horizonte. Morro do Querozene ("Kerosene Hill") is a slum area with 24,179 inhabitants in the middle of the Barroca district. Even the richest neighborhoods, Serra and Belvedere, on the slopes of the Serra do Curral, are next to the Favela da Serra and the Favela Santa Lucia, with 23,342 and 13,018 inhabitants, respectively.

Household sizes do not vary a great deal between the various municipalities. The largest average household sizes are found in the district of Sao Jose da Lapa, which is part of Vespasiano, (5.5 persons per household), in Raposos (5.3), and the Pinhoes district of Santa Luzia (5.3). The smallest average household sizes are those of the Central Area (4.0) and Lagoinha (4.1).

MIXED RACIAL AND ETHNIC COMPOSITION

Located between the prosperous State of Sao Paulo and the poor Northeast, Minas Gerais has a mixed ethnic and racial composition, which is reflected in its capital. The municipality of Belo Horizonte has the highest proportion (58.5 percent) of white population anywhere in the metropolitan area, although this percentage is well below that of Sao Paulo and the southern states of Brazil.

Of the remainder of the popula-

tion, the majority is considered to be "of mixed descent." The black population counted by the 1980 population was smallest in Pedro Leopoldo (5.5 percent) and largest in Santa Luzia (13.2 percent), Sabara (11.6 percent), Ribeirao das Neves (11.2 percent), Betim (10.2 percent), and Vespasiano (10.2 percent). In 8 municipalities more than half of the population was considered of mixed descent: Raposos (65.9 percent), Sabara (61.4 percent), Caete (59.1 percent), Rio Acima (57.9 percent), Lagoa Santa (55.6 percent), Ribeirao das Neves (53 percent), Pedro Leopoldo (50.5 percent), and Nova Lima (50.4 percent).

Historically, migration from abroad has been less important to Minas Gerais than to Rio de Janeiro or particularly to Sao Paulo. Today, the foreign born form a minimal share of the metropolitan population: 11,582 individuals, or 0.46 percent in 1980.

HEALTH AND EDUCATION

Infant mortality rates in the metropolitan area, which caused much concern during the early 1970s (when they soared to more than 100 per 1,000 live births), have diminished considerably, from 101.0 in 1977 to 41.8 per 1,000 live births in 1984, still high but acceptable by Brazilian standards. Some care should be taken in the interpretation of these numbers, for their denominators are based on projected, rather than registered, births. While the latter tend to underestimate the birthrate, the former may overestimate it, thereby artificially reducing the infant mortality rate.

The life expectancy for the second half of the 1970 decade has been estimated at 61.9 years, close to the national average. The most common causes of death are cardiovascular diseases (186.7 per 100,000 in the metropolitan area and 216.0 in the municipality, in 1982), neoplasmas (82.4 and 109.4), and infectious and parasitary diseases (76.6 and 89.9), indicating a mixture of diseases typical of more and less developed areas.

In 1983, the metropolitan area had 84 hospitals, with a total of 16,432 hospital beds, of which 67, with 13,611 beds, were located in Belo Horizonte proper. Only 18 hospitals were public. Lagoa Santa, Raposos, and Ribeirao das Neves had none. More than a third of the hospital infrastructure is concentrated in the central area, with minor concentrations in Santa Efigania and Mangabeiras. At the polyclinic level, the metropolitan area counts 73 health centers, of which 41 are public, and 165 smaller health posts. The city of Belo Horizonte proper had an estimated 5,422 physicians in 1982.

Illiteracy rates in most of the municipalities are lower than the Brazilian average (26 percent), with the exception of Ribeirao das Neves (35.9 percent), Ibirite (31.7 percent), Betim (30.7 percent), and Vespasiano (26.4 percent). The lowest illiteracy rate is that of Belo Horizonte, with 15.9 percent.

According to the 1980 census, the percentage of persons who have completed four years of elementary school varied from 28.4 percent in Ribeirao das Neves and 29.8 percent in Betim to 41.8 percent in Nova Lima and 40.5 percent in Raposos.

The college educated formed less than 1 percent of the population, except in Belo Horizonte (4.4 percent), Nova Lima (1.8 percent), Pedro Leopoldo (1.7 percent), and Lagoa Santa (1.3 percent). The

higher percentages of the latter three municipalities are probably accounted for by the fact that some of the well-to-do who work in Belo Horizonte have their residences here.

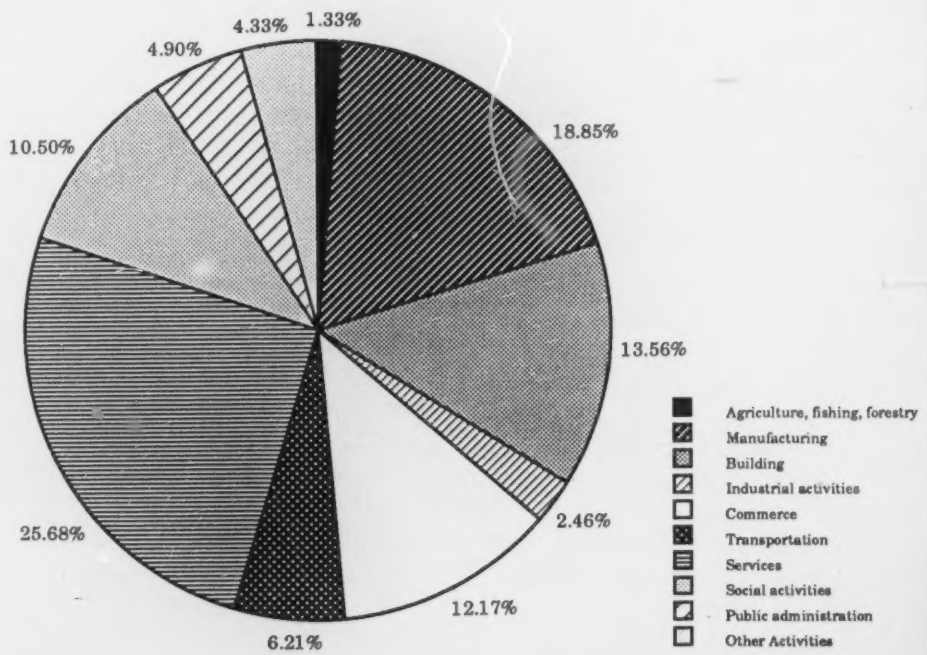
In 1983, a total of 301,793 children were enrolled in the first four years of elementary education and 201,780 in the next four years of primary education. Enrollment in secondary schools numbered 75,396, with 65,247 in the municipality of Belo Horizonte. The two universities, the Federal and the Catholic University of Minas Gerais, had a total enrollment of 25,649 and a faculty of 3,611 in 1981.

INDUSTRY IS BACKBONE OF ECONOMY

Manufacturing is the largest employment category for males (23.1 percent), with building and construction next (20.1 percent), while female employment is mostly concentrated in services (45.5 percent). On the whole, women make up 34.4 percent of the labor force. Apart from its present importance, the secondary sector is also the fastest growing employment category. While total employment in the municipality of Belo Horizonte grew 72 percent between 1970 and 1980, the figure was 115 percent for the secondary sector. The corresponding figures were 214 percent and 249 percent for Contagem, 145 percent and 250 percent for Betim, 177 percent and 221 percent for Santa Luzia, and 727 percent and 1580 percent for Ribeirao das Neves.

WHERE THEY WORK

Economic activity of the employed: Belo Horizonte, 1980



TELEPHONE STILL A RARITY

As elsewhere in Brazil, the telephone is still a relatively rare commodity, even though 32 percent of the homes in Belo Horizonte now possess one. In 1984, the total number installed in Belo Horizonte was 579,000, with an additional 31,188 in Contagem, which is not particularly low when compared to other cities, like Rio de Janeiro. High installation costs (over $US 1000) and inability of the local telephone companies in all major cities to expand the network at a sufficient rate continue to be obstacles to more widespread ownership in Belo Horizonte.

SOURCES OF INFORMATION

The most comprehensive information on the metropolitan area of Belo Horizonte is published by the Metropolitan Planning Board (PLAMBEL), Avenida Brasil 688, 30140 Belo Horizonte MG, telephone 031-212-2500. Among other publications, this study draws heavily on a three-volume study entitled "A estrutura urbana da RMBH," published in 1986, which analyzes the historical roots, the present situation, and future prospects for the metropolitan area. A two-volume study published in 1985 lists a wealth of detailed information, in the form of tables. Its title is "Informacoes Basicas da RMBH."

A source of information on the State of Minas Gerais in general is the Statistical Yearbook of Minas Gerais, published by the Superintendency of Statistics and Information (SEI) of the State Planning Secretariat, Rua Goncalves Dias 2553, 5o andar, 30.140 Belo Horizonte MG.

More general information, at the municipal and regional level, can be found in the 1980 demographic census, published by the Brazilian Census Bureau (Fundacao IBGE), Avenida Franklin Roosevelt 166, Rio de Janeiro, and in the Statistical Yearbook of the State of Minas Gerais. The Brazilian census is available at the US Bureau of the Census. Those interested should contact the area specialist, Linda Peterson, at (301) 763-4086.

For economic data, the recently published 1985 economic censuses, which cover agriculture, industry, commerce, and services, may be useful. Further reference materials on Brazil available in the United States are found in the May 1982 issue of International Demographics, volume 1, number 2, available for $14 from American Demographics Inc.

—Ralph Hakkert

The author would like to thank Carlos Tisseki Gondo for compiling many of the original tables and Elieth Amelia de Sousa, of PLAMBEL, for her guidance in selecting the relevant data material.

inside information

BRAZIL'S BIG THREE OFFER BRAZIL'S PROMISE AND PROBLEMS: SAO PAULO RIO DE JANEIRO AND BELO HORIZONTE

In the best of developing-country scenarios, the third-millenium city would be Brazilian. Brazilian because urban areas in fast-industrializing Brazil offer all the best and all the worst of turn-of-the century-development to a newly enfranchised populace. While most of the rest of Latin America stagnated or contracted, Brazil's real GDP grew 10 percent a year on average between 1965 and 1974, then stumbled, but rebounded in 1984, with 1986 growth again up to its old standards.

But explosive growth also magnified existing problems, like the wide disparity in income levels, leaving Brazil's income per capita below that of 10 of 13 South American countries. It also created cities where clusters of skyscrapers are ringed by shanty towns. But because of the speed of economic growth and the entrepreneurial bent of the Brazilian populace, slum dwellers do have at least a chance to get themselves out. A half million new businesses are created every year in Sao Paulo alone.

Whether Brazil can continue to grow fast enough and equitably enough to make room for its growing numbers of urban poor is the big question. Brazil may well be the testing ground for capitalism in meeting the needs of third-millenium urban people.

Brazil's big three mega-cities—Sao Paulo, Rio de Janeiro, and Belo Horizonte—dominate the lineup of Latin America's top 10 metro areas. In 1985, the metro area of Sao Paulo ranked second; Rio de Janeiro, fourth; and Belo Horizonte, eighth.

These three cities have, however, experienced different fates over the last 25 years. As Rio de Janeiro decayed following its loss of capital status to Brasilia in 1960, Sao Paulo grew explosively. Now, Sao Paulo's economy is greater than that of any South American country, apart from Brazil's itself. Rio's growth was 15 percent below that of Brazil's in the 1970s. Rio's new governor hopes to revive Rio's economy by attracting a $500 million petrochemical complex, encouraging more data-processing firms to locate in the suburbs, and developing islands lying offshore for tourism.

Meanwhile, Sao Paulo continues to grow rapidly, although more slowly than in the 1970s. Belo Horizonte, despite being smaller in population, outpaced Sao Paulo's growth in the last decade, averaging about 5.4 percent a year, as compared to Sao Paulo's 4.5 percent a year. Due to their industrial bases and rapidly expanding service sectors, both Sao Paulo and Belo Horizonte have done a better job at creating employment opportunities than Rio.

Other contrasts between these three cities include the much-joked-about stereotypical characteristics of their residents. Whereas the inhabitants of Rio (Cariocas) are characterized as easygoing and exuberant, and those of Sao Paulo (Paulistas) as cold and business-like, the stereotype of the "Mineiro" is that of a traditionalist who hears much, talks little, and has a vocation for politics. Among the national politicans that the state of Minas Gerais (capital city, Belo Horizonte) has produced are President Juscelino Kubitschek (1956-60) and President Tancredo Neves, who died tragically in 1985 before he could be sworn in.

HOW THEY DIFFER

Metro areas	*Population in 1985 (millions)*	*Population in 2000 (millions)*	*annual growth rate (1970-1980)*	*Median age*	*Median income ($ per month)*
Sao Paulo	15.8	24.0	4.5%	23.5	$124
Rio de Janeiro	10.2	13.3	2.5	24.6	115
Belo Horizonte	3.1	5.1	5.4	21.3	102

					Television			
Municipality	*Number of households*	*Electricity*	*Radio*	*Refrigerator*	*B & W*	*Color*	*Private car*	*Telephone*
Sao Paulo	2,000,000	98	89	83	49	41	37	28
Rio de Janeiro	1,300,000	98	91	90	46	45	33	33
Belo Horizonte	400,000	96	80	72	52	32	29	32

what the numbers mean

WHAT DOES "METRO AREA" REALLY MEAN?

Whether your data is city or metro-area data can mean a lot.

City, metropolitan area, greater metro area, urban agglomertion, conurbantion? Exactly how do they differ? Defining jurisdictions is often problematic for national statistical agencies due to the vagaries of geography and local politics. Unusual marriages often take place, such as Trenton N.J. and Wilmington, Del. being included in the metro area of Philadelphia.

No wonder, ranking the world's cities becomes a complicated task. Unfortunately for urban-data users, each nation sets up their own definition criteria for classifying population as city, metro, or nonmetro. International organizations, such as the U.N., most often use the metro area as defined by the specific country to make up their world city rankings. The U.N. list uses the term "urban agglomeration"—roughly equivalent to metro area—for its ranking of the 30 largest urban areas in the world.

Since nations do not uniformly define their jurisdictions, it is best when comparing international urban data to understand the criteria used to define the particular areas you are interested in. Choosing a consistent standard to apply or understanding the criteria used for already made comparisons can give you a better picture of urban area demographics. Be careful to note whether data is for the city proper or the metro area.

The metro area of Belo Horizonte, for example, encompasses the municipality of Belo Horizonte. The municipality grew at 3.7 percent annually between 1970 and 1980, slower than for the larger metro area which grew at about 5.4 percent annually over the same period. Often the city proper grows more slowly than or even loses population to its surrounding satellite cities and suburbs.

One place to look for an up-to-date ranking of the world's metro areas is the U.S. Census Bureaus's new *World Population Profile:1985* (see review on page 16). The Bureau's Center for International Research (CIR) first defined a city as a "population cluster of continuous built-up area with a population density of at least 5,000 persons per square mile." They then included in their population counts any contiguous area meeting this density requirement regardless of jurisdictional borders. Numero uno according to the CIR is the metro area of Tokyo-Yokohama at 25.4 million people. Belo Horizonte comes in as the world's 55th largest city in 1985.

LATIN AMERICA'S METRO AREAS—WHERE DOES BELO HORIZONTE FIT IN?

Latin America's 12 largest metro areas in 1985, according to the United Nations

	population (in millions)
1. Mexico City, Mexico	17.3
2. Sao Paulo, Brazil	15.8
3. Buenos Aires, Argentina	10.8
4. Rio de Janeiro, Brazil	10.3
5. Lima, Peru	5.6
6. Bogata, Colombia	4.4
7. Santiago, Chile	4.1
8. Caracas, Venezuela	3.7
9. Belo Horizonte, Brazil	**3.2**
10. Guadalajara, Mexico	2.7
11. Porto Alegre, Brazil	2.7
12. Monterrey, Mexico	2.5

publications

MORE FROM THE CENSUS BUREAU

World Population Profile: 1985, U.S. Census Bureau, Washington, D.C., 53 pp. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Based on data from 205 countries, this chartbook graphically presents a clear and understandable demographic picture of the world today and in the future. The chartbook format with easy-to-read charts and graphs makes complex data readily accessible to the layman.

In addition, the *Profile* includes many of the work tables used to generate the charts and graphs. This gives the researcher the exact numbers behind the graphics and enhances understanding of the associated text. Any background data used to derive the estimates in the *Profile* not published in the volume are available by writing to Chief, Center for International Research, Bureau of the Census, Washington, D.C. 20233.

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Another indispensable tool from the U.S. Census Bureau:

The updated Consumer Demand in China: A Statistical Factbook *by Jeffrey R. Taylor and Karen A. Hardee. For further information, contact the Center for International Research (301) 763-4012.*

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